



Maryland Vital Statistics

Infant Mortality in Maryland, 2011

August 2012

FAST FACTS

- Maryland's 2011 infant mortality rate of 6.7 per 1,000 live births was identical to the rate in 2010, which was a historic low for the State.

- Between 2010 and 2011, there was a small decrease in the white infant mortality rate and a small increase in the black rate. Neither change was statistically significant.

- The neonatal mortality rate increased by 8% between 2010 and 2011, while the postneonatal mortality rate decreased by 20%.

- The leading causes of infant death were low birth weight, congenital abnormalities, SIDS, maternal complications of pregnancy, and complications of the placenta, cord and membranes.

- The average infant mortality rate has fallen by 7% over the past decade, decreasing more rapidly among white infants than among black infants.

- Despite the statewide decline in infant mortality over the past decade, rates have increased in several counties located in the Eastern Shore area of the State.

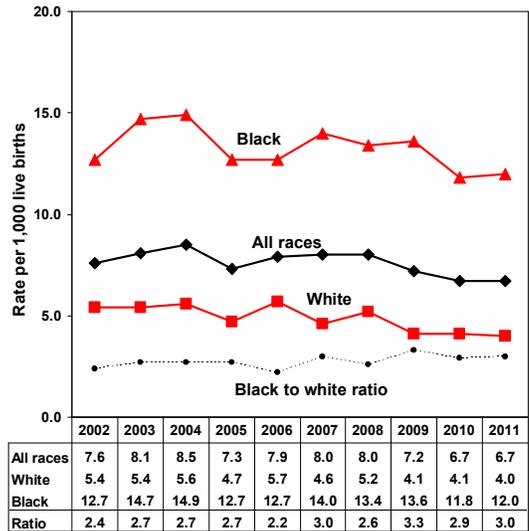
Trends

The 2011 infant mortality rate of 6.7 per 1,000 live births was identical to the rate in 2010, thereby maintaining for two consecutive years the lowest rate ever recorded in Maryland. A total of 493 infants died in 2011 compared with 496 in 2010. There were 170 deaths among infants born to white women, 293 deaths among infants born to black women, 23 deaths among infants born to Asian women, and 31 deaths among infants born to women of Hispanic origin, who may be any race. There were no deaths among American Indian infants.

The white infant mortality rate fell slightly from 4.1 per 1,000 live births in 2010 to 4.0 per 1,000 live births in 2011, while the black infant mortality rate increased from 11.8 to 12.0 (Figure A and Table 1). The rate increased from 3.2 to 4.2 among Asians and fell from 4.1 to 3.0 among Hispanics. These changes were not statistically significant.

Average infant mortality rates have fallen in Maryland over the past decade, particularly among white infants. The overall rate fell from an average of 7.9 per 1,000 live births in the years 2002-2006 to an average of 7.3 per 1,000 live births in the years 2007-2011, a 7% decline. While the average rate for whites fell by 17%, the average rate for blacks fell by

Figure A. Infant Mortality Rates by Race and Black to White Ratio, Maryland, 2002-2011.



only 5%. Only the declines among the total population and among white infants were statistically significant (Table 1).

Since the white infant mortality rate has shown a sharper decline in recent years than the black rate, the black to white infant mortality ratio continues to increase. A black infant born in 2011 was three times more likely to die than a white infant; in 2002, the ratio was 2.4.

Age at Time of Death

The neonatal mortality rate (deaths to infants under 28 days of age per 1,000 live births) increased from 4.7 in 2010 to 5.1 in 2011, an 8% increase (Table 1). Neonatal mortality rates increased among both white infants and black infants. Conversely, the overall postneonatal mortality rate (deaths from 28 days through 11 months of age per 1,000 live births) fell by 20%, from 2.0 in 2010 to 1.6 in 2011. The white postneonatal mortality rate fell by over 30%, while the black infant mortality rate showed a more modest decline.

Table 1. Infant, Neonatal and Postneonatal Mortality Rates* for Selected Years, Maryland.

	Rate* by year		Average rate*	
	2010	2011	2002-06	2007-11
Infant mortality				
All races**	6.7	6.7	7.9	7.3 ***
White	4.1	4.0	5.3	4.4 ***
Black	11.8	12.0	13.7	13.0
Neonatal mortality				
All races**	4.7	5.1	5.7	5.3 ***
White	2.8	3.1	3.8	3.2 ***
Black	8.4	8.8	9.9	9.4
Postneonatal mortality				
All races**	2.0	1.6	2.2	2.0 ***
White	1.3	0.9	1.5	1.2 ***
Black	3.4	3.2	3.8	3.6

*Per 1,000 live births

**Includes races other than White and Black

***Rates for 2002-2006 and 2007-2011 differ significantly (p<.05)

None of the changes between 2010 and 2011 were statistically significant.

The overall neonatal mortality rate declined by an average of 7% and the postneonatal mortality rate by an average

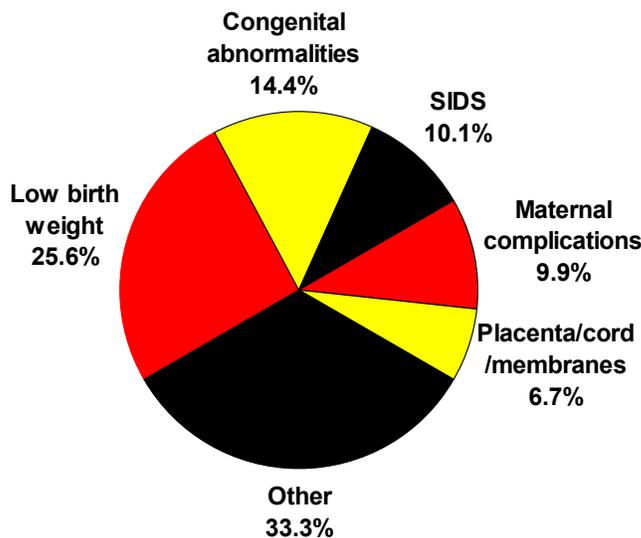
of 9% between the periods 2002-2006 and 2007-2011. Rates fell more rapidly among white infants than among black infants during both the neonatal and postneonatal periods. Only the declines among the overall population and white infants were statistically significant.

Causes of death

The leading causes of infant death in 2011 were disorders relating to short gestation and unspecified low birth weight (“LBW”); congenital malformations, deformations, and chromosomal abnormalities (“congenital abnormalities”); Sudden Infant Death

Syndrome (“SIDS”); maternal complications of pregnancy; and complications of the placenta, cord and membranes. Maternal complications of pregnancy include conditions such as premature rupture of membranes and cervical incompetence. (Figure B).

Figure B. Leading Causes of Infant Death, Maryland, 2011.



In rank order, LBW, congenital abnormalities, and SIDS were the leading causes of death among white infants, while LBW, maternal complications, and congenital abnormalities were the leading causes of death among black infants.

The leading causes of neonatal mortality were LBW, congenital abnormalities, and maternal complications of pregnancy. The leading causes of postneonatal mortality were SIDS, accidents, and congenital abnormalities.

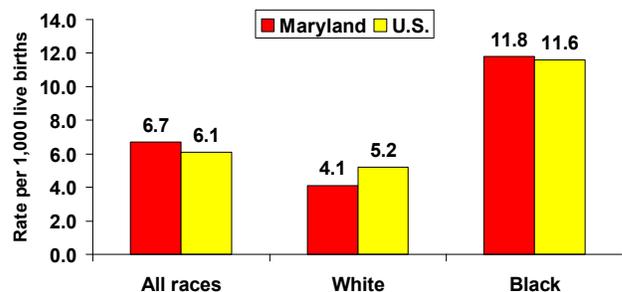
Cause-specific mortality rates continue to be higher for black infants than white infants for all leading causes of death. Compared with white infants, black infants were 11 times more likely to die in 2011 as a result of maternal complications; four times more likely to die as a result of complications of the placenta, cord, and membrane; three times more likely to die as a result of LBW and SIDS; and twice as likely to die as a result of congenital abnormalities.

Comparison of rates in Maryland and the U.S.

Maryland’s infant mortality rate for all races combined has historically been higher than the national rate, mainly because the Maryland population is comprised of a higher proportion of black residents, a group with generally higher infant mortality rates than whites. Historically, white infant mortality rates have been lower in Maryland than in the nation. Black rates have been higher in Maryland than nationally in recent years.

Figure C shows a comparison of infant mortality rates in Maryland and the U.S. in 2010, the most recent year for which preliminary national data are available.

Figure C. Infant Mortality Rates by Race, Maryland and the U.S., 2010.



Regional and county differences

The number of infant deaths and infant mortality rates by race, region and political subdivision are shown in Table 2. Rates are shown for only those areas where five or more deaths occurred since rates based on small numbers are statistically unreliable.

Although Maryland's average infant mortality rate showed a statistically significant decline between the years 2002-2006 and 2007-2011, the only subareas of the state with statistically significant declines between these two time periods were Montgomery County and the National

Capital Area, which includes Montgomery County. Rates declined to a lesser degree in Prince George's County, which is also located in the National Capital Area (Table 3). Although not statistically significant, rates have risen by 20% or more over the past decade in a number of jurisdictions located in the Eastern Shore Area of the State, including Caroline, Dorchester, Queen Anne's and Worcester Counties. With the exception of Dorchester County, infant mortality rates have historically been below the State average in each of these areas.

TABLE 2. INFANT DEATHS AND INFANT MORTALITY RATES BY RACE, REGION AND POLITICAL SUBDIVISION, MARYLAND, 2010 AND 2011.

Region and political subdivision	ALL RACES				WHITE				BLACK			
	Number of infant deaths		Infant mortality rate*		Number of infant deaths		Infant mortality rate*		Number of infant deaths		Infant mortality rate*	
	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011
Maryland	496	493	6.7	6.7	178	170	4.1	4.0	295	293	11.8	12.0
Northwest Area	28	20	5.0	3.7	21	13	4.4	2.8	7	7	12.4	14.6
Garrett	3	1	**	**	3	1	**	**	0	0	**	**
Allegany	5	5	6.8	7.7	5	3	7.1	**	0	2	**	**
Washington	11	4	6.2	**	6	4	4.0	**	5	0	25.0	**
Frederick	9	10	3.2	3.6	7	5	3.0	2.2	2	5	**	16.3
Baltimore Metro Area	243	220	7.2	6.6	76	64	3.8	3.3	157	148	13.7	13.1
Baltimore City	98	93	11.0	10.5	10	9	3.6	3.1	87	83	14.7	14.5
Baltimore County	66	62	6.7	6.3	26	21	4.4	3.6	36	40	11.6	12.7
Anne Arundel	33	35	4.7	5.1	18	18	3.3	3.5	14	16	10.9	13.0
Carroll	8	4	5.0	**	7	4	4.6	**	1	0	**	**
Howard	23	16	6.8	4.7	7	7	3.5	3.5	14	4	19.4	**
Harford	15	10	5.5	3.7	8	5	3.7	2.3	5	5	11.2	10.9
National Capital Area	167	184	6.6	7.3	49	55	4.1	4.5	107	108	10.0	10.4
Montgomery	57	69	4.3	5.3	27	24	3.3	2.9	20	28	7.0	10.1
Prince George's	110	115	9.0	9.5	22	31	5.8	7.9	87	80	11.1	10.5
Southern Area	24	25	5.8	5.9	15	10	5.4	3.4	8	14	6.8	12.0
Calvert	3	7	**	7.3	3	6	**	7.4	0	1	**	**
Charles	10	15	5.6	8.2	4	3	**	**	5	11	5.9	13.5
Saint Mary's	11	3	7.6	**	8	1	6.8	**	3	2	**	**
Eastern Shore Area	34	44	6.9	8.9	17	28	4.5	7.6	16	16	15.1	14.8
Cecil	7	10	5.9	8.8	3	10	**	9.7	3	0	**	**
Kent	0	2	**	**	0	0	**	**	0	2	**	**
Queen Anne's	5	2	10.3	**	4	2	**	**	1	0	**	**
Caroline	3	3	**	**	0	1	**	**	3	2	**	**
Talbot	1	7	**	22.2	1	5	**	22.3	0	2	**	**
Dorchester	4	1	**	**	1	1	**	**	3	0	**	**
Wicomico	7	10	5.6	7.7	3	5	**	6.3	4	5	**	10.6
Somerset	0	4	**	**	0	2	**	**	0	2	**	**
Worcester	7	5	16.7	10.6	5	2	15.3	**	2	3	**	**

*Per 1,000 live births

**Rates are not shown for areas with <5 infant deaths since rates based on small numbers are statistically unreliable.

TABLE 3. NUMBER OF INFANT DEATHS, AVERAGE INFANT MORTALITY RATE BY FIVE YEAR INTERVAL AND PERCENT CHANGE IN RATES BETWEEN INTERVALS BY REGION AND POLITICAL SUBDIVISION, MARYLAND, 2002-2006 AND 2007-2011.

Region and political subdivision	<i>Number of infant deaths</i>		<i>Average infant mortality rate*</i>		<i>Percent change**</i>
	2002-2006	2007-2011	2002-2006	2007-2011	
Maryland	2958	2769	7.9	7.3	-6.9 ***
Northwest Area	163	147	5.6	5.1	-8.8
Garrett	11	7	7.0	4.8	-31.6
Allegany	23	24	6.8	6.8	0.3
Washington	50	49	5.7	5.4	-5.0
Frederick	79	67	5.2	4.6	-11.6
Baltimore Metro Area	1385	1312	8.2	7.6	-6.6
Baltimore City	555	551	12.0	11.7	-2.6
Baltimore County	368	350	7.8	7.0	-9.8
Anne Arundel	240	211	7.0	6.0	-14.5
Carroll	37	34	3.8	4.1	6.3
Howard	110	91	6.4	5.4	-16.1
Harford	75	75	5.1	5.3	3.5
National Capital Area	1077	976	8.3	7.5	-8.9 ***
Montgomery	419	358	6.2	5.3	-14.4 ***
Prince George's	658	618	10.5	10.0	-5.4
Southern Area	157	145	7.3	6.8	-7.6
Calvert	28	25	5.5	5.3	-3.9
Charles	83	67	8.9	7.2	-19.8
St. Mary's	46	53	6.6	7.3	10.8
Eastern Shore Area	176	189	7.0	7.3	4.1
Cecil	37	29	6.0	4.7	-21.0
Kent	9	6	10.0	6.4	-36.1
Queen Anne's	12	16	4.7	6.2	33.5
Caroline	9	17	4.1	7.5	81.9
Talbot	11	10	6.2	5.6	-8.8
Dorchester	18	29	10.3	14.5	41.5
Wicomico	51	49	8.4	7.5	-11.5
Somerset	15	15	11.3	11.5	1.9
Worcester	14	18	6.0	7.7	28.8

*Per 1000 live births.

**Percent change is based on the exact rates and not the rounded rates presented here.

***Rates for 2002-2006 and 2007-2011 differ significantly (p<.05).



For more information or to obtain Maryland vital statistics data please contact the:

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